# BMP Active Sedimentation Trend Analysis: May 2007

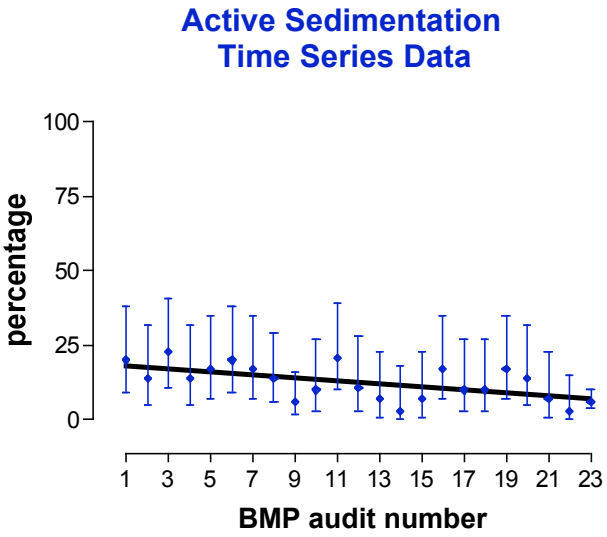
**Active sedimentation** is a measure identifying active sediment delivery to a nearby stream or other water body, at the time the field audit is performed, as a consequence of not implementing all necessary BMP to the standards specified by VDOF. The question asked is: Does sedimentation from surface runoff exist now due to not meeting Virginia Department of Forestry technical specifications (yes or no)? Field observation of active erosion tied directly to deposition of soil in a stream or water body yields a positive evaluation (yes) in this category. A continuous pathway such as a rill or gully directly connected to observed delivery of soil to the streambed or water body is needed in order to receive a positive (yes) evaluation. The quantity of sediment delivered is not evaluated, only evidence that the process is active.

The table below lists the percentage of sampled sites that received a positive evaluation (yes) in the active sedimentation category. These data and confidence intervals are plotted on the graph. The black trend line shows that active sedimentation has decreased over time. This trend line's departure from a 0 slope is statistically significant. [1]

**Active Sedimentation Trend**: $r^2 = 0.3454$, deviation of the regression line from 0 slope is statistically significant**.**

**Active Sedimentation Trend**

| Date | Percentage | Upper 95% CI | Lower 95% CI |
|---|---|---|---|
| Nov-93 | 20% | 38% | 9% |
| Jun-94 | 14% | 31% | 5% |
| Nov-94 | 23% | 41% | 12% |
| Jun-95 | 14% | 31% | 5% |
| Dec-95 | 17% | 35% | 7% |
| Jun-96 | 20% | 38% | 9% |
| Nov-96 | 17% | 34% | 7% |
| Jun-97 | 14% | 29% | 6% |
| Nov-98 | 6% | 16% | 1% |
| Oct-99 | 10% | 27% | 3% |
| Jun-00 | 21% | 39% | 10% |
| Nov-00 | 11% | 28% | 3% |
| Jul-01 | 7% | 23% | 1% |
| Nov-01 | 3% | 18% | 0% |
| Jun-02 | 7% | 23% | 1% |
| Nov-02 | 17% | 34% | 7% |
| Jun-03 | 10% | 27% | 3% |
| Nov-03 | 10% | 27% | 3% |
| Jun-04 | 17% | 34% | 7% |
| Nov-04 | 14% | 31% | 5% |
| Jun-05 | 7% | 23% | 1% |
| Nov-05 | 3% | 14% | -1% |
| Dec-06 | 6% | 10% | 4% |




[1] A linear regression of these data yields a downward sloping trend as represented by the black line. The linear regression is statistically significant. This means that the slope downward of the regression line is statistically different than a line with a zero slope.